Fighting tuberculosis with faster, more accurate diagnostics

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Around the world, tuberculosis is making a comeback, owing to the increased incidence of HIV/AIDS and several other factors. According to the World Health Organization (WHO), between 1900 and 2015, the incidence of new TB cases increased nearly 40 percent—from an estimated 7.5 million to 10.4 million. Furthermore, the untreatable drug-resistant strains of the bacterium are rapidly increasing, causing grave concern. In 2015, WHO estimated 480,000 new cases of multidrug-resistant TB and an additional 100,000 people with rifampicin-resistant TB. (Rifampicin is a front-line drug in TB treatment.) Drug resistance is a widespread global challenge today and could result in a post-antibiotic era, if unchecked.

That and the global health concern of TB are two reasons why our team at Los Alamos National Laboratory, in collaboration with several institutions, are working to develop an innovative tool set for early and accurate diagnosis of the disease.

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